



# ecology and environment, inc.

111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415

International Specialists in the Environment

## PRELIMINARY ASSESSMENT

### EXECUTIVE SUMMARY

To: Alan Altur, U.S. EPA  
From: Patrick Muldowney, FIT *PM*  
Date: October 31, 1991  
Subject: Cottage Grove Landfill, Dolton, Illinois  
ILD980497747/FO5-9104-013/FIL0217PA

EPA Region 5 Records Ctr.



305066

The Cottage Grove Landfill site is an inactive landfill encompassing approximately 14 acres in a industrial, residential and recreational area in Dolton, Illinois. The site borders the Little Calumet River to the north, an undeveloped area to the east, an industrial complex to the south and a harbor and marina used for recreational boating to the west.

The Cottage Grove Landfill has no engineered liner. The landfill was used beyond the intended capacity without any design for the expansion.

The Cottage Grove Landfill operated from 1976 to 1982. Unpermitted deposition of lagoon sludges containing heavy metals began in 1980, continued after site closure in 1982 and was ceased sometime in 1983. Approximately 8 acres were covered with lagoon sludge. Lagoon sludges were used as top cover to support a vegetative base in an effort to reduce erosion at the site. The sludges and a treated sludge product with a trademark name of NU-EARTH, contained mercury 1400 - 16,000 ug/kg, lead 154 - 3390 mg/kg, chromium 522 - 4940 mg/kg, and cadmium 37 - 576 mg/kg. Analytical data indicates the range of metals contained in sludges and was supplied by the generator of the sludges, The Metropolitan Sanitary District of Greater Chicago. The total amount of lagoon sludges deposited at the site was approximately 136,092 dry tons.

A long history of poor management practices caused Cottage Grove Landfill to be cited on numerous occasions by IEPA for improper daily cover of waste. IEPA has also observed leachate seeps on-site. Contamination of two on-site monitoring wells was documented during an IEPA inspection on March 15, 1982. Analytical results from groundwater

collected from the monitoring wells indicated the presence of the TCL compounds and TAL analytes including boron, fluoride, ammonia, phenolics, phosphorous, sulfate, copper and manganese at levels greater than drinking water standards. Inadequate capping of the Cottage Grove Landfill site after closure in 1982 has caused a slope erosion problem and continued leachate production at the site.

At an unknown date between March 15, 1982 and October 26, 1982 an additional layer of clay cover was added to the north, east, and west slopes to strengthen eroded areas. The depth of the clay cover added to the landfill is not known.

Erosion of the landfill cover resulting in exposed debris, inadequate fencing and unrestricted access to the public were observed by FIT, during a drive-by inspection conducted on June 12, 1991. A marina used for recreational boating borders the northwest corner of the site.

A release to groundwater is suspected based on the documented contamination of the on-site monitoring wells and the absence of an engineered liner at the site. Two residences are located within 200 feet of the southwest border of the site. Prior to 1989, these houses as well as the Klimeck boat yard west of the site utilized private wells for drinking water. A second residential area located north of the Little Calumet River, approximately 1250 feet from the landfill, also obtained drinking water from private wells prior to 1989. Currently, both of these areas obtain drinking water from Lake Michigan via the municipal systems. Most of the population within a four mile radius of the site obtains drinking water from Lake Michigan. The nearest residential well is located over a 1/2 mile from site. The AOC of this well is Silurian dolomite which is hydraulically connected to overlying Quaternary and alluvial deposits.

A wetland is located along the eastern border of the site. The Little Calumet River, classified as a fishery, borders the north face of the site. Both environments are potentially threatened by the Cottage Grove Landfill site. Leachate seeps from the sides and surface of the landfill threaten both environments which are subject to receive runoff during periods of high precipitation. The steep grade of the landfill sides promotes surface water drainage in all directions. Two residences located within 200 feet of the site are potentially affected by contaminated runoff from the site.

FIT file information does not indicate a potential for a release of TCL compounds or TAL analytes into the air from the Cottage Grove Landfill.